

RAN-2411001102030001**B.Sc. (I.T.) (Sem. II) Examination March - 2026****Minor - Introduction to DBMS (Paper - 204)****[Total Marks: 50****સૂચના : / Instructions**

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવર્ણી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book.

Seat No.:

Student's Signature

- Q-1. A) Answer the following questions in brief. (Any Five) 05**
- 1) What is the role of Database Administrator?
 - 2) What is a multi-valued attribute? Give one example with its respective symbol.
 - 3) What is an attribute? Explain attributes of entity "student".
 - 4) What do you mean by atomicity?
 - 5) What is a primary key? Explain 1 example of primary key.
 - 6) What is a relationship set?
- Q-1. B) Answer the following questions in brief. (Any Five) 05**
- 1) What is an Instance? Explain one example of an Instance.
 - 2) Give an example of the Logical structure of entity students.
 - 3) Explain super class and sub class.
 - 4) Give an example of strong entity and a weak entity.
 - 5) Give an example of Ternary relationship between entities.
 - 6) Write an ALTER statement to add 1 column into an existing table.
- Q-2. A) Answer the following questions in detail. (Any Two) 10**
- 1) Compare Hierarchical, Network, and Relational data models. Justify why the relational model became dominant.
 - 2) Discuss transaction management and analyze how ACID ensures reliability.
 - 3) Describe the concepts of generalization and specialization in the ER model. Highlight one key difference between them with an example.
- Q-2. B) Answer the following questions in brief. (Any Two) 06**
- 1) Explain XML databases with its types.
 - 2) What is MySQL? List three reasons why it is a popular choice for web-based software applications compared to other RDBMS.

- 3) What are the rules for defining a Primary Key in a MySQL table? Provide the SQL syntax to add a Primary Key to an existing table using the ALTER command.

Q-3. A) Answer the following questions in detail. (Any Two) 10

- 1) Explain the primary limitations of file-based data management systems that led to the development of modern database technology.
- 2) Explain the different views of a database architecture in detail.
- 3) Explain the concepts of DDL and DML in DBMS, differentiate between them, Write SQL statements for creating a table.

Q-3. B) Answer the following questions in brief. (Any Two) 06

- 1) Explain these string functions: CONCAT(), REVERSE(), SUBSTRING()
- 2) What are 'Cardinality Ratios' in an E-R Diagram?
- 3) Explain any 5 numeric function with example.

Q-4. A) Analyse university information system and draw an ER diagram of the same system with required features. 05

Q-4. B) Explain the concept of a multimedia database. Explain three classes of multimedia database and also explain the types of multimedia database briefly. 03
